White Paper Report

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Developing the Spatial Humanities:

A White Paper

The Polis Center

INDIANA UNIVERSITY–PURDUE UNIVERSITY INDIANAPOLIS

Developing the Spatial Humanities

A White Paper on the NEH Advanced Institute on

Spatial Narratives and Deep Maps

Influenced by the so-called spatial turn, humanists have rediscovered the power of maps and spatial analysis, especially aided by Geographic Information Systems (GIS), to bring new perspectives to questions that have long engaged them. But the results to date have been mixed, in part because GIS with its positivistic origins is ill-suited too much of the data and the nuanced questioning and approaches used by humanities scholars. The NEH Advanced Institute on Spatial Narratives and Deep Maps sought to address these well-known issues and to deepen scholarly understanding of the coupling of complex humanities data and geospatial technologies through a focus on two innovative forms—spatial narratives and deep maps. These approaches bend spatial and digital technologies to the intellectual traditions of humanists, thereby constituting a bridge between diverse avenues of investigation. In doing so, we[1] addressed the first and fourth goals of the NEH call for proposals, namely, to bring together humanists and technologists to advance innovative approaches to the digital humanities and to assess the tools and methods available to support it.

Six aims governed the Institute agenda:

1. Strengthen the ability of humanists to think spatially and to appreciate the history and contemporary landscape of the spatial humanities.
2. Establish a strong conceptual and methodological framework in geospatial technologies.
3. Apply these conceptual and technological spatial approaches to the development of spatial narrative and deep mapping, engaged as two key components of a vibrant spatial humanities.
4. Reinforce these foundational steps through guided research problems that will lead to identifying insights that arise from a spatial approach.
5. Publish the results of the Institute in both traditional and digital forms.
6. Facilitate professional relationships among participants with the goal of encouraging ongoing collaborative research and teaching in the area of spatial and digital humanities.

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[1] In this report, "we" refers to the principals from the Virtual Center for the Humanities: David Bodenhamer (PI), Indiana University Purdue University, Indianapolis; John Corrigan (co-PI), Florida State University; and Trevor M. Harris, (co-PI), West Virginia University. The Polis Center at IUPUI served as grant recipient and manager on behalf of the Virtual Center.

The Institute had three distinct phases, each with specific aims and activities. The first phase centered on the necessary preparations for a successful Institute, including advertising and recruitment, logistical support, and development of the curriculum. We circulated the CFP widely among organizations and list-serves with announced interests in the spatial humanities, including but not limited to the following: HUMANIST, HASTAC, EDUCAUSE, H-Net, CenterNet, and to appropriate networks in the Social Science History Association, American Academy of Religion, Association of American Geographers, American Historical Association, and Organization of American Historians. We responded to approximately thirty inquiries for additional information, and by the deadline forty-eight candidates from the U.S., Canada, Europe, and Australia had submitted applications. We invited twelve participants—six from the US, five from Europe, and one from Canada (but a US citizen)—who represented the disciplines of European and American history, religious studies, geography, GIScience, museum studies, anthropology, archaeology, and literary studies. Attendees were predominantly early career scholars—doctoral students and assistant professors—with one full professor also selected.

The most significant activity of the first phase was the pre-Institute expert workshop. Our aim was to provide Institute participants with a set of essays that would provide an informed theoretical framework for the discussions to follow. These essays also would contribute some examples of how well-known scholars from a variety of fields are applying these concepts to advance knowledge. We recruited the following scholars to the pre-Institute workshop, held four months prior to the Institute: Stuart Aitken, Professor of Geography, San Diego State University; Phil Ethington, Professor of History, University of Southern California; Ian Gregory, Professor of Digital Humanities, Lancaster University (UK); Worthy Martin, Professor of Humanities Computing, University of Virginia; Barney Warf, Professor of Geography, University of Kansas; and May Yuan, Professor of Geography, University of Oklahoma. Each of the participants, including the principals, produced an essay on spatial narratives and deep maps that explored issues ranging from ontology and epistemology to method and technique. These essays constituted one of the core readings for Institute participants. Institute participants subsequently offered critiques of the essays, which in turn were revised for publication in the Indiana University Press Series on the Spatial Humanities, for which the co-directors serve as series editors. The resulting book, *Deep Maps and Spatial Narratives*, now in press with publication scheduled for fall, 2014, should reach a scholarly audience interested in pursuing this innovative approach to the spatial humanities.

The second phase was the Institute itself. We met each day (except weekends) from 9:00 am until 4:00 pm (or later) for two weeks in June 2012. Our aim during the first week was to settle definitions, embed the concepts of deep mapping and spatial narrative in a theoretical context, critically examine a variety of web-based and other efforts to implement deep mapping techniques, and outline a strategy for engaging the participants in a team-based rapid prototyping environment that took place in week two. Helping in these sessions were the two guest lecturers—Professors Ian Gregory and May Yuan—both of whom were contributors to the pre-

Institute expert workshop. In addition to their presentations, each guest lecturer also consulted separately with participants on questions, research themes, and problems of particular concern to them. Also during week one, we were able to exchange presentations with the counterpart NEH Institute being held at UCLA. Not only were we able to learn from each other (we held a wrap-up video session with UCLA on the last day of our institute to share what the respective workshops had accomplished) but participants from the two institutes engaged in lively blogging Twitter chat throughout the two weeks, especially focused on the video exchanges, with the blog managed by Mia Ridge receiving over 600 views.

Institute discussions were by turns intense, creative, and frustrating, but they were necessary for forming a shared vocabulary and ultimately led to the common vocabulary and shared conceptual framework that were necessary to move to the second week's activities. In week two, we divided participants into three teams and charged each group to develop a deep map that could support a spatial narrative about the intersection of religion and community in Indianapolis. We chose Indianapolis because of the availability of a rich set of quantitative, qualitative, and visual data created by The Polis Center in earlier projects. We ended the Institute with a session devoted to envisioning opportunities for future work. Unlike other NEH-supported institutes, we purposefully did not require participants to bring pre-defined projects, although the directors met as a group with each participant to discuss her or his research and to offer both suggestions and technical help to advance the participant's separate work. We believed that the theory and practice of deep mapping—and the participants themselves—would gain more if we focused together on a common purpose and project. The disadvantage, of course, was that the materials provided to each team were somewhat unfamiliar. But this approach required the teams to engage in rapid prototyping and to rely upon the expertise of each other and the institute staff in pursuit of a commonly defined goal rather than a series of uncoordinated projects. The result surprised us, pleasantly: the deep maps and spatial narratives produced by the three teams were sophisticated, suggestive, and compelling, with each team adopting a different approach that revealed how supple and powerful these methods can be for humanists.

The third phase was in some respects the most ambitious and, perhaps as a result, the one that met with mixed success. Our aim was to develop a deep mapping prototype, which we decided would synthesize the three approaches outlined in the Institute. Following the Institute we engaged participants in   prototype development via Skype. We settled on the functional requirements and worked through the technical requirements, with both elements taking longer than expected. At this point, it had become apparent that we would only be able to implement a conceptual prototype. Our work plan and cost-estimates revealed that the development path would be too expensive, not because the technology was too immature, although in some ways it was, but because we had not solved a major problem about how to visualize the results.

We decided that the more productive course—and the one most suitable for sharing with professional colleagues elsewhere—was to invite the teams to publish their various approaches

in a special section of the *International Journal of Humanities and Arts Computing* (Vol. 7, 1-2, pp. 170-227). Not only did this allow the teams to advance directly the variants of deep mapping that they had developed, but it gave them the opportunity to discuss the theoretical and practical problems of doing so in a way that added to the literature. The three directors provided an overview of the Institute and the challenges of deep mapping in the special issue and also presented the work of the Institute to relevant professional associations, namely, the Social Science History Association annual meeting in Chicago in November 2013 and the European Social Science History Conference to be held in April, 2014. In addition, one of the directors—Bodenhamer—featured this work in invited lectures he gave in 2013 in Israel, Australia, and Germany as well as at the University of Minnesota and Western Michigan University, and in an expert workshop in the UK at which another director (Harris) also participated.

In retrospect, we believe the decision not to proceed beyond the conceptual prototype was the correct one. It has allowed us to present the work to professional colleagues and to gain their feedback. We also have begun to build a network of scholars who are interested in working with us on furthering this approach. The suggestions that have stemmed from the journal publication, and that we are certain will come from the appearance of the book later this year, have allowed us to identify concepts, solutions and experts that we might have not considered otherwise. The intervening time also has revealed more recent interests and initiatives in deep mapping to which we could not have responded two years ago. The work, in brief, is continuing—and with results that exceed what we had expressed when presenting our plan initially to NEH.

We met all six aims of the Institute, as identified in the second paragraph of this report, with the second, third, fifth, and sixth goals producing the most persuasive results. With few exceptions, applicants demonstrated good familiarity with spatial thinking and geospatial technologies, which enabled us to devote more time—much of the first week in fact—to the third goal of developing the theory and practice of deep mapping and spatial narrative. An anonymous post-event survey of participants confirmed that the Institute had met its goals. Participants rated it as a very valuable experience and reported that they were eager to use their new-found understanding in their own research. They also valued the relationships they established with their colleagues and the directors. Although the participants found the theoretical discussions in week one to be helpful, several recommended that any future institutes should move more quickly to the project-oriented work. In general, we agree that the three days devoted to rapid prototyping were essential to the success of the Institute, and we too would restructure any future institute to provide greater opportunity for hands-on work. Additional evaluation occurred in the form of peer reviews with the publications that stemmed from the institute; the publications are evidence of the high quality of work produced by the participants at both the institute and the expert workshop.

Perhaps the accomplishment most worthy of notice, however, is evidence that the participants are using what they learned at the Institute in their own work; they also are introducing these

concepts to other scholars. Participants introduced what they had learned to colleagues in the UK (Open University, Lancaster University, Kings College London, University of Strathclyde, University of Nottingham, University of Sterling), Finland (University of Helsinki), Israel (Hebrew National University and National Library of Israel), Germany (Max Planck Institute, Berlin), and Australia (University of Queensland). The work fostered by the Institute not only continues but is finding new expression in a number of disciplines and projects. At least five grant proposals featuring deep mapping were in progress in the UK, US, Netherlands, China, and Australia as of the writing of this white paper (February 2014), and a number of expert workshops were being planned, many involving the institute participants. We also are seeing the term "deep mapping" mentioned increasingly in non-Institute-related published work and presentations in the digital humanities.

It is difficult to capture in a concise report all the lessons learned in this advanced institute. Although we may not be able to assess its value fully for some time yet, some observations are worthy of note. Advanced institutes require a great deal of preparation, far more than is true of many research projects, but the reward of a rich intellectual exchange more than justifies the effort. These events should not be considered training, at least not if our experience is any guide. They are (or can be), in fact, dynamic laboratories for exploration and discovery around tightly focused issues, with experts from multiple disciplines given the luxury of time to work together on a common theme or problem. This result, we believe, may ultimately be more valuable to the advancement of a field than simply bringing participants to a common location to work on their existing projects or to learn new skills. We used a team approach, a rapid prototyping environment, and an emphasis on translating theory to practice and then asked participants to move into unfamiliar territory both in terms of the research problem and collaborative methods. The participants produced far more than we expected, as evidenced by the *IJHAC* special report that reveals not only a sophisticated blending of theory and practice but also a keen appreciation for how the approach of deep mapping can make contributions to existing bodies of knowledge in the humanities and computing sciences. What made this outcome possible, we believe, was the quality of the participants, whom we selected carefully to provide a good mix of theoretical knowledge and computer skills. The expert workshop we held in advance of the institute also sharpened our definition and understanding of deep maps and provided a knowledge base from which to wrestle, challenge, and revise concepts of deep mapping and spatial narratives. Finally, we underestimated the degree to which we as directors would benefit from the two weeks. At every turn, the participants were raising new questions, offering new perspectives, or proposing conceptual frameworks or methods that has made our thinking more mature and more accessible to humanists and social scientists beyond our own disciplines. Ultimately we learned more than they did, which perhaps is how it should be.

Deep mapping is still in its infancy and interest will continue to grow, thanks in part to the work of the Institute and the publications that have flowed, and likely will continue to flow, from it. We believe that the long-term impact will be significant, primarily because the concept of deep

mapping and the need for better methods for spatial narratives are pressing issues in the spatial humanities, a rapidly growing field. What has become apparent already is that deep mapping and spatial narratives are topics of keen interest to digital humanists in general and especially to scholars in the spatial humanities. We are confident that new developments in geospatial and other digital technologies will speed the adoption of this approach, which more readily accommodates the questions and methods of humanities researchers than a strict adherence to GIS alone can do.

David J. Bodenhamer, John Corrigan, and Trevor M. Harris

Institute Co-Directors

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